

**REMARKS**

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Claim Status / Explanation of Amendments

Claims 1-2, 4-6, 8-9, 11-12, 14-15, 17, and 19-20 are pending and the rejection of these claims pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,566,807 to Fujita, et al. (hereinafter “Fujita”) in view of U.S. Patent No. 6,376,694 to Uchida, et al. (“Uchida”) was maintained in the Advisory Action. [3/2/09 Advisory Action, p. 2].

By this paper, claims 1 and 2 are amended and claims 5-6 and 15 are canceled without prejudice or disclaimer. Claims 1 and 2 are amended to incorporate the subject matter of canceled claims 5 and 6.

No new matter will be introduced into this application by entry of these amendments. Entry is respectfully requested. After entry of these amendments claims 1-2, 4, 8-9, 11-12, 14, 17, and 19-20 are pending.

B. Claims 1-2, 4, 8-9, 11-12, 14, 17, and 19-20 are Patentable over Fujita in view of Uchida

Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of claims 1-2, 4, 8-9, 11-12, 14, 17, and 19-20 as allegedly being unpatentable over Fujita in view of Uchida. As set forth in detail below, Fujita and Uchida, whether alone or in combination, do not teach, disclose, or suggest an organic electroluminescent device in which the first organic compound is a silole derivative with  $\geq 1\%$  and  $\leq 50\%$  by weight of the total weight of the electron transport layer and the second organic compound is a quinolinolate metal complex. In view of the following

remarks, Applicants kindly request that the Examiner reconsider and withdraw the obviousness rejection.

In response to Applicants' February 9, 2009 reply to the December 24, 2008 final Office Action, the Advisory Action contends that:

As applicant points out, Fujita does not expressly disclose that the first organic compound is a silole derivative. Uchida teaches a silole derivative that can be added to an electron transport layer to take advantage of the electric properties of the silole ring (col. 7, lines 10-26). This combination is motivated by the express teaching in Uchida that the silole derivative material may be used in an electron transport layer to improve efficiency and longevity of the device (col. 2, line 3- - col. 3, line 67). [3/2/09 Advisory Action, p. 2].

Applicants respectively disagree with the Advisory Action. Although Uchida discloses that "the inventors have found a specific silole derivative and further found that use of the silole derivative provides an organic EL element having a high electroluminescent efficiency" [Uchida, col. 2, lns. 35-37], Applicants respectfully submit that neither Fujita nor Uchida teach or disclose the specific combination of a second organic compound with a silole derivative present in the specified concentration range. Notwithstanding whether the combination of Fujita and Uchida teaches Applicants' organic electroluminescent (EL) device, in order to expedite prosecution of the present application, Applicants have amended claim 1 for further clarity such that it now recites, *inter alia*, that "the second organic compound is a quinolinolate metal complex."

Applicants' claim 1 specifically requires that the electron transport layer includes at least a first and second organic compound. The amendments to claim 1 further specify that "the first organic compound is a silole derivative and is from 1% or more to 50% or less by weight of the total electron transport layer" and that "the second organic compound is a quinolinolate metal complex." This specific combination is advantageous in that both the lifetime and luminous

efficiency of the EL device are further improved. Applicants respectfully submit that Fujita and Uchida, whether alone or in combination do not teach or disclose this combination nor do they recognize the improvements in the organic EL device afforded by the combination.

The feature added to claim 1 was incorporated from canceled claims 5 and 6 which were previously rejected in the December 24, 2009 final Office Action. That Office Action contends that “[w]ith regard to claim 6, the modified Fujita and Uchida organic electroluminescent device of claim 1 discloses that the second organic compound is a quinolinolate metal complex (Fujita, col. 24, line 42 – col. 26, line 50).” [12/24/09 Office Action, p. 5, ¶ 14]. The recited portion of Fujita covers Comparative Examples 9-12 as well as Examples 15-24 which, upon review, do not appear to teach or disclose a quinolinolate metal complex. Examples of various quinolinolate metal complexes are detailed within the specification at p. 9, ln. 23 to p. 10, ln. 32. None of these appear to be taught or disclosed by Uchida. Applicants therefore respectfully submit that Uchida does not teach or disclose the incorporation of a quinolinolate metal complex as a second organic compound in the electron transport layer.

The Advisory Action further contends that:

The office action points to several examples given by Fujita (Comparative Examples 10-12 and Examples 22-24), which have the claimed ratio of first organic compound to second organic compound. Further, applicant's claimed range is extremely broad, covering nearly half of all the possible ratios of the two compounds. Therefore, applicant's critical range argument is also not found to be persuasive.. [03/02/09 Office Action, p. 2].

Applicants respectfully disagree with the Office Action. As an initial matter, Applicants' claimed “ratio” involves the weight percentage of the silole derivative. As already acknowledged by the Office Action, Fujita does not expressly disclose that the first organic compound is a silole derivative. Since Fujita does not disclose incorporation of a silole

derivative in the first place, there can be no teaching or suggestion for the use of a silole derivative in any concentration range. This concentration range also is not disclosed by Uchida. See, e.g. MPEP 2144.05, Section III for a discussion on the criticality of ranges. Accordingly, neither Fujita nor Uchida disclose the use of a silole derivative in an electron transport layer with a concentration of  $\geq 1\%$  and  $\leq 50\%$  by weight of the total weight of the electron transport layer in combination with a second organic compound which is a quinolinolate metal complex as required by claim 1.

Accordingly, Fujita and Uchida – whether alone or in combination – fail to teach, disclose, or suggest an organic EL device comprising a “electron transport layer including at least a first organic compound and a second organic compound, ... wherein the first organic compound is a silole derivative and is from 1% or more to 50% or less by weight of the total weight of the electron transport layer, and wherein the second organic compound is a quinolinolate metal complex” as recited in Applicants’ amended claim 1. Applicants respectfully submit that claim 1 is patentably distinct from Fujita and Uchida for at least this reason. Since independent claim 2 is directed to an organic EL device comprising this same patentable element it is deemed to be allowable for at least similar reasons. Dependent claims 4, 8-9, 11-12, 14, 17 and 19-20, which depend either directly or indirectly from claim 1 or 2, are asserted to be in condition for allowance for at least similar reasons. Withdrawal of the Section 103 rejection is therefore respectfully requested. Applicants respectfully submit that all of the pending claims are now allowable and early, favorable action in that regard is requested.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claim as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art.

Likewise, Applicants have chosen not to swear behind the references cited by the Office Action, or to otherwise submit evidence to traverse the rejection at this time. Applicants, however, reserve the right, as provided by 37 C.F.R. §§ 1.131 and 1.132, to do so in the future as appropriate. Furthermore, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claim from which they depend are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants, however, reserve the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is earnestly solicited. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 504827, ORDER NO. 1004378-52630.

Respectfully submitted,  
LOCKE LORD BISSELL & LIDDELL, L.L.P.

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By:



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